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NEW AMERICAN ASILIDÆ (DIPTERA). II[1]

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Among the Diptera received for identification during the past few months were a number of undescribed Asilidæ, and these, together with some new forms in the Museum collection, are the basis of the present paper. The small collection made by Dr. F. Campos in Ecuador is particularly interesting and contains some unusual forms, while Mr. R. D. Bird secured many fine species in Oklahoma. Some of the new species contained in the Oklahoma collection are not dealt with in this contribution but will be described by Mr. S. W. Bromley.

The types of the new species are in The American Museum of Natural History.

Saropogon Loew

Material belonging to this genus, received since the publication of the key to the Nearctic species in American Museum Novitates No. 425, calls for a revision of that key. The following is presented in order to bring the key up to date.

Table of Species

1.—Scutellum with normally long bristles.....4.
Scutellum without long bristles; they are not more than half as long as the scutellum.....2.
2.—Abdomen metallic bluish.....*pulcherrima* Williston.
Abdomen black or reddish.....3.
3.—Disc of scutellum bare; four short black marginal bristles.....*aridus* Curran.
Disc of scutellum with short hairs.....*abbreviatus* Johnson.
4.—Abdomen black.....5.
Abdomen mostly reddish.....9.
5.—Bristles of the coxæ black.....6.
Bristles of the coxæ white or yellow.....7.
6.—Scutellum with two black bristles.....*purus* Curran.
Scutellum with four whitish-yellow bristles.....*combustus* Loew.
7.—Antennæ black.....*combustus* Loew.
Antennæ reddish except the style.....8.

[1]See American Museum Novitates No. 425 for paper No. 1.

8.—Scutellum with four bristles.....*dispar* Coquillett.
Scutellum with two bristles.....*birdi*, n. sp.
9.—Venter black.....10.
Venter reddish on more than the basal half.....13.
10.—Wings brownish or blackish.....11.
Wings hyaline.....*coquilletti* Back.
11.—Femora without black vitta above.....12.
Femora with broad black vitta above.....*dispar* Coquillett.
12.—Scutellum with two bristles.....*purus* Curran.
Scutellum with four bristles.....*combustus* Loew.
13.—Wings entirely hyaline.....14.
Wings brown along the veins.....*luteus* Coquillett.
14.—Mesonotum gray pollinose.....*semiustus* Coquillett.
Mesonotum yellowish-gray pollinose, with three brown vittæ.
hyalinus Coquillett.

Saropogon combustus Loew

Loew, 1874, Berl. Ent. Zeit., p. 373.

A female, Woods Co., Okla., July 16, collected by Mr. R. D. Bird, agrees with a male taken at the same time in having black antennæ, palpi, and wings. The legs are reddish, their coxæ with yellowish bristles. This form differs so strikingly from the reddish form described as *adustus* by Loew that the two appear to represent distinct species. However, if such is the case the males are evidently so similar in every way that they will be very difficult to separate unless the male of *adustus* is still unknown. This seems unlikely, since the red form has been frequently taken at the same time as the black males. I am not aware of any previous record of the female form with the black abdomen.

Saropogon dispar Coquillett

Coquillett, 1902, Journ. N. Y. Ent. Soc., X, p. 139.

A female, Osage Co., Okla., July 22, 1929 (Bird), has the abdomen black and the femora, palpi, and antennæ wholly reddish.

Saropogon birdi, new species

Related to *dispar* Coquillett but distinguished by the presence of only one pair of scutellar bristles, black basal segments of the palpi, etc. Length, about 27 mm.

Female.—Head black, yellow pollinose, the posterior orbits white pollinose; face and lower border of the front reddish in ground color; bristles wholly pale yellowish. Apical segment of the palpi and the base of the proboscis reddish. Antennæ reddish, the style black.

Thorax blackish; mesonotum reddish, with three broad, narrowly separated blackish vittæ, the outer ones abbreviated in front, the median one behind; pronotum

and postnotum reddish. Bristles yellowish. Pleura with rather golden pollen, the mesonotum stained but obviously clothed with yellow pollen. Scutellum reddish, flat, with one pair of bristles and without hair.

Coxæ and posterior trochanters black, the anterior coxæ reddish anteriorly and thickly yellow pollinose. Legs reddish, the femora blackish above on most of their length, the posterior pair black on the sub-basal third of the ventral surface; bristles pale yellowish.

Wings rather amber-colored, the apex very broadly infuscated; fourth posterior cell broadly open. Halteres reddish.

Abdomen shining black, the second, third and fourth segments each with a subtriangular, transverse whitish pollinose spot on either side of the posterior margin, the ground color beneath obscurely reddish. Hair black; yellowish on the first segment and the broad sides of the second and third.

TYPE.—Female, Johnston Co., Okla., June 20, 1929 (R. D. Bird).

LESTOMYIA Williston

This genus was established by Williston[1] in 1883 with *Clavator sabulonum* Osten Sacken as the type species. At the same time Williston described *L. fraudiger*. Both species have been recorded from California and *sabulonum* from Oregon. I have not seen *fraudiger*, but there are specimens of *sabulonum* before me collected by Dr. Lutz in Wyoming in 1920. A second species from Wyoming is undescribed.

TABLE OF SPECIES

1.—Posterior femora black except at the base and apex; at most the base of the first antennal segment reddish ..... 2.

Posterior femora red except on the dorsal surface; basal two segments of the antennæ reddish yellow ..... *strigipes*, n. sp.

2.—Anterior femora with a small black ring ..... *fraudiger* Williston.

Anterior femora with the narrow base and the apical fourth, or slightly more, reddish ..... *sabulonum* Osten Sacken.

Lestomyia strigipes, new species

Readily distinguished from the described species by the color of the legs and the wholly yellowish basal antennal segments. Length, 9.5 to 12 mm.

MALE.—Head black in ground color, with whitish hair and yellowish-white bristles; pollen whitish, that on the front with a yellowish tinge. Antennæ situated slightly nearer to the oral margin than to the top of the ocellar tubercle. Palpi and proboscis shining black, white-haired. Antennæ reddish, the third segment black, the second with a brown tip, a little shorter than the first; third segment increasing in width from the basal fourth, at its widest point about twice as wide as near the base; style small, obtuse. Cheeks shining black in the middle.

Thorax cinereous-yellow pollinose, somewhat brassy, the pleura more whitish except in the middle. Mesonotum with a pair of narrow median brownish vittæ, the

[1]Trans. Amer. Ent. Soc., XI, p. 19.

outer vittæ obscure and only visible in some lights. Hair and bristles yellowish, the pleura practically bare except for the trichostical hairs. Prosternum bare. Scutellum flat, with three or four pairs of yellow marginal bristles, otherwise bare.

Legs reddish; coxæ brown at the base, cinereous pollinose; all the femora broadly black above, without pollen; tibiæ black or ferruginous above, the tarsi black or ferruginous. Hair very pale yellowish, white on the coxæ; bristles yellow.

Wings hyaline, the veins brown; fourth posterior cell broadly open; anal cell open or closed in the wing margin. Halteres yellow.

Abdomen black in ground color, the sides and apical segments reddish or mostly so, thickly cinereous-yellow pollinose, each segment with an oval, shining black spot in the middle, the third and fourth with a more or less distinct oval, bare spot toward either side in the middle. Venter brown and reddish, thickly pollinose. Hair and the bristles on the sides of the first segment yellowish. Genitalia shining red, the hair mostly whitish.

FEMALE.—Sixth to eighth abdominal segments shining dark reddish.

TYPES.—Holotype, male, allotype, female, male and female paratypes, Pine Bluffs, Wyoming, June 9, 1920 (F. E. Lutz).

COPHURA Osten Sacken

The type of this genus is *sodalis* Osten Sacken, of which I have not seen specimens. From the description given by Osten Sacken it is apparent that most of the species placed in the genus belong elsewhere and in 1925 I erected the genus *Buckellia* (Can. Ent., LVII, p. 156) for *Cophura albosetosa* Hine. Several North American species belong to *Buckellia*, but I am not sure just where the line should be drawn and, until I have studied the genotype, do not feel competent to render an opinion. I think that the species I am describing herein as *C. panamensis* is a species of *Cophura* in the strict sense, since the upper half of the face is without trace of hairs. In addition to this the face gradually widens from the antennæ to the lower part of the eyes. If this character is present in *sodalis* the limits of *Cophura* may be well defined and the genus would then probably include *humilis* Williston and *bella* Loew. In the other species I have seen, the face is only a little wider below than at the antennæ and it bears two longitudinal, single or double rows of hairs above the mystax. In typical *Buckellia* the face is gently convex, but in other species it is flattened on the upper half.

For convenience I have placed all the species in *Cophura* and included them in a key. Most of the species are known to me only from description and I have used Melander's key (Psyche, XXX, pp. 208, 209) as a basis.

TABLE OF SPECIES

1.—Abdomen more or less reddish, sometimes wholly red or with the sides or apical segments or the apices of the segments reddish; abdomen rather broad....2.
Abdomen wholly black in ground color....5.
2.—Abdomen red or reddish yellow....3.
Abdomen mostly black, the apices of the segments or lateral margins or apical segments reddish....4.
3.—Mesonotal stripes brownish....*bella* Loew.
Mesonotal vittæ deep black....*sodalis* Osten Sacken.
4.—Apices of the abdominal segments reddish; femora black, their apices and the broad bases of the tibiæ yellow....*humilis* Williston.
Apical one or two abdominal segments and usually the broad lateral margins reddish; legs dark reddish or ferruginous....*panamensis*, n. sp.
5.—Abdomen wholly pollinose on the first five segments....6.
Abdomen more or less extensively black on the second and following segments....9.
6.—Tarsal segments yellow basally; anal cell closed and short petiolate. *clausa* Coquillett.
Tarsi black....7.
7.—Antennal style almost twice as long as the second antennal segment (Oklahoma). *stylosa*, n. sp.
Antennal style equal in length to the second antennal segment....8.
8.—Scutellum with one pair of marginal bristles (Arizona)....*pollinosa* Curran.
Scutellum with three pairs of marginal bristles (Colorado).....*lutzi*, n. sp.
9.—Anterior border of the abdominal segments pale pollinose....10.
Segments not pollinose anteriorly, the pollen limited to the sides and posterior borders....12.
10.—Pollen on the sides of each segment enclosing a shining black spot or separated from a posterior pollinose spot....17.
Pollen not enclosing black spot....11.
11.—Anal cell closed and petiolate....*clausa* Coquillett.
Anal cell open....*trunca* Coquillett.
12.—Legs entirely black....14.
At least the tibiæ mostly reddish....13.
13.—Femora black....*Buckellia vitripennis* Curran.
Legs brownish red....*brevicornis* Williston.
14.—Oral bristles black....*scitula* Williston.
Oral bristles whitish....15.
15.—Mesonotum with conspicuous erect hair....16.
Mesonotum nearly bare....*fur* Williston.
16.—Hair and bristles of the mesonotum brownish or brownish yellow; wings faintly tinged with brown....*pulchella* Williston.
Hair and bristles whitish; wings pure hyaline.....*Buckellia albosetosa* Hine.
17.—Pollen on the front of the segments not connected with that on the posterior corners....*melanochaeta* Melander.
Pollen on the sides of the segments enclosing a black spot....*highlandica* Cole.

Cophura panamensis, new species

Black, the sides of the abdomen and apical two segments reddish; legs dark reddish; wings largely brownish. Length, 8 to 12 mm.

FEMALE.—Head grayish-white pollinose, the front bare and shining black except on the anterior border. Face, cheeks and frontal orbits reddish in ground color. The whitish mystax extends from orbit to orbit and occupies a little more than the lowest third of the face, the upper part flat and bare, the lower part slightly produced but receding below; the face widens from the level of the antennæ to below the eyes. Front slightly narrowed above, with several obscure pale hairs on either side; ocellar tubercle with five or six coarse brown hairs on either side. Occiput, palpi and proboscis with pale yellowish hair; palpi and proboscis brownish red to blackish. Antennæ reddish or brownish red, the third segment black above and apically, the basal segments sometimes blackish above; the hair mostly pale yellowish, but there are a few black bristly hairs; third segment longer than the basal two combined, narrow on the basal fifth, widest beyond the middle, usually with one or two black hairs above; style short and rather thick, not longer than the basal width of the third antennal segment, the basal half blackish, the apex reddish yellow.

Thorax ferruginous in ground color, yellowish-brown pollinose, the metanotum black behind. The mesonotal vittæ are brown, the median one divided by a yellowish line, evanescent posteriorly. Hair coarse, black, the bristles either black or yellowish; the vittæ bare. Pleura with pale, fine hair, the trichostical bristles numerous, mostly black.

Legs ferruginous or brownish red, the posterior femora black on the lowest third; coxæ with brownish pollen, the anterior pair on the basal third and the posterior pair on the outer side bare, the hair and bristles yellow, mostly black on the anterior pair. Hair and bristles of the legs black, the femora with a few yellow hairs dorsally on the basal third.

Wings pale brownish yellow, brown in front to beyond the middle where the dark color extends over the cross-veins and forms clouds on the cross-veins and furcations on the apical part of the wing; basal cells of a paler brown; anterior branch of the third vein without an appendage. Fourth posterior cell very broadly open apically. the anal cell narrowly open. Halteres dull reddish-yellow.

Abdomen shining black, the lateral margins broadly dark red, sometimes only partly so, the seventh and eighth segments dark red. Base and sides of the first segment and basal sternite brownish pollinose, the venter shining dark reddish. Hair pale yellowish, very short and inconspicuous on the dorsum, longer on the sides, venter and genitalia.

TYPES.—Holotype, female, Barro Colorado Island, Canal Zone, January 25, 1929; paratype, female, Barro Colorado, February 21, 1929 (Curran).

This species has the abdomen almost parallel-sided on the basal three-fourths and, like *sodalis* Osten Sacken and *humilis* Williston, has the abdomen very shining. It most nearly approaches *humilis* but has differently colored legs and more extensively brown wings.

Cophura stylosa, new species

Black, with cinereous-yellow and dull ochreous pollen, the abdomen almost wholly pollinose; tibiæ reddish yellow. Length, 11.5 mm.

FEMALE.—Head ochreous pollinose, the occiput grayish; mystax composed of about three confused rows of pale yellowish bristles above the oral margin; face flat above, with a double row of pale hairs on either side; front with three or four pale hairs on either side; one pair of bristles on the ocellar tubercle and a few hairs. Bristles of the occiput yellowish, the hair white. Palpi and proboscis black, white-haired. Antennæ black, thinly pale pollinose, with pale hair and bristles; third segment longer than the basal two segments combined, tapering on its apical third, style as long as the first two segments.

Thorax densely grayish-ochreous pollinose, the hair and bristles pale yellowish; mesonotum with three broad, shining black vittæ, the hair sparse and fine. The mesonotum may normally be wholly pollinose although it does not appear to be much rubbed, the fine hair being present. Scutellum concolorous with the mesonotum, wholly pollinose, bare except for the single pair of strong marginal bristles.

Legs black, the tibiæ reddish yellow with black apices; femora with obscure reddish apex; hair and bristles wholly yellowish. Coxæ grayish-yellow pollinose.

Wings hyaline, tinged with brownish on the apical half; anterior branch of third vein without basal appendage. Squamæ and halteres yellow, the latter with black base.

Abdomen black in ground color, densely cinereous pollinose, the dorsum more or less ochreous, the sixth segment above, except the sides, and the seventh segment wholly, shining black, the apices of the fifth tergite and sixth sternite also shining except at the sides. Hair very short, pale yellowish, a little longer on the venter.

TYPE.—Female, Woods Co., Oklahoma, July 1, 1930 (R. D. Bird).

Differs from *pollinosa* Curran by the much longer antennal style.

Cophura lutzi, new species

Very similar to *pollinosa* Curran but the scutellum bears six marginal bristles instead of two. Length, 7.5 mm.

MALE.—Head black in ground color, cinereous-white pollinose, the vertex tinged with yellow; hair and bristles white. Mystax composed of a row of fine oral bristles and rather sparse hair. Proboscis and palpi shining black. Antennæ black, brown pollinose; first and second antennal segments of about equal length, the third longer than the basal two combined, tapering on the apical third; style slightly longer than the second segment.

Thorax cinereous pollinose, the mesonotal vittæ brown. Hair and bristles yellowish, the pleural hair white. Scutellum bare except for the six marginal bristles.

Legs black, the coxæ cinereous pollinose, the tibiæ reddish yellow on the basal three-fourths. Hair and bristles whitish.

Wings hyaline, the veins brown. Halteres reddish yellow.

Abdomen cinereous pollinose, the dorsum cinereous brown. Hair yellow, whitish on the sides and venter. Genitalia shining brown.

TYPE.—Male, Regnier, Colorado, June 6–9, 1919 (F. E. Lutz).

Of the three species with wholly pollinose abdomen, *pollinosa* Curran bears only two rows of long bristly hairs beneath the femora and short hair in addition, while both *stylosa* and *lutzi* bear erect and fairly long hair between the rows of bristly hairs. *C. stylosa* has the femora more strongly haired beneath than *lutzi* and the middle femora display distinct bristles but these are not developed in *lutzi*.

PSILOCURUS Loew

Dr. Campos forwarded a single male of this rather rare genus collected in Ecuador, and Mr. Bird collected three specimens in Oklahoma, each securing species apparently undescribed. All the species resemble each other and, as has been pointed out by both Loew and Williston, bear a rather close resemblance to species of *Laphystia* Loew. Despite the open marginal cell these two genera are related to *Atomosia* and I agree with Williston that they belong in the Laphriinæ rather than in the Dasypogoninæ. I have seen none of the described species, so the following key is based upon descriptions.

TABLE OF SPECIES

1.—Scutellum with two marginal bristles ..... 2.
Scutellum with four marginal bristles ..... 3.
2.—First antennal segment mostly yellow (Texas) ..... *nudiusculus* Loew.
Antennæ wholly black (Mexico) ..... *caudatus* Williston.
3.—Tomentum of the mesonotum black on the disc except along the suture; outer pair of scutellar bristles as long as the inner, which are not erect. *camposi*, n. sp.
Tomentum of the mesonotum mostly golden; median pair of scutellar bristles erect and stronger than the outer pair ..... 4.
4.—Femora red beneath, the base of the tibiæ yellow ..... *birdi*, n. sp.
Legs wholly black (South Dakota) ..... *modestus* Williston.

Psilocurus camposi, new species

Black, with cinereous pollen; halteres, trochanters, tips of the femora and a broad posteroventral stripe on the anterior femora reddish. Length, 9.5 mm.

MALE.—Head yellowish-cinereous pollinose, the occiput rather silvery; hair and bristles whitish, the front with several fine, short black bristles on either side, the occiput with three black bristles on either side above. Palpi and proboscis black, the hair pale. Antennæ black, the first segment with pale yellowish, the second with black hair, the first with a long, pale bristle below; third segment about as long as the first two combined, oval, rather pointed apically.

Thorax with cinereous pollen. Mesonotum shining black, its sides and posterior border pale pollinose; sides and broad anterior border with very short, appressed golden hair, the disc with appressed black hair, some of which has a golden tinge in

some lights. Scutellum shining black, with short, appressed black hair, the base with rather golden hair; four pairs of equally strong marginal bristles. Pleura with whitish pile, some of the trichostical bristles black. Mesonotal slopes bare.

Legs black; trochanters and tips of the femora reddish, the anterior femora broadly reddish on the posteroventral surface. Hair silvery white, black on the upper surface of the posterior femora, the apical half of their tibiæ dorsally and the upper surface of their tarsi. Middle tibiæ with two black bristles in front, the posterior legs with the dorsal bristles black; hair rather long posteriorly on the anterior four tibiæ.

Wings cinereous hyaline; anterior branch of third vein arising at almost a right angle, without appendage. Halteres reddish.

Abdomen rather dull black, the apical segment metallic greenish-black. Second to sixth segments with a large, transverse cinereous triangle on the posterior corners, the pollinose spots broadly separated in the middle; first segment almost wholly pale pollinose, the seventh with a small spot behind. Hair very short and appressed, black, the pollinose areas with white hair; second to fifth segments each with two or three whitish bristles on either side. Genitalia ferruginous, the appendages black; hair black, the outer lamellæ with abundant white hair on their apices, the globular basal portion with a strong tuft of black hair near the middle on either side. Venter black, the hair mostly black.

TYPE.—Male, Guayaquil, Ecuador (F. Campos).

Psilocurus birdi, new species

Black, with cinereous pollen, the legs and abdomen partly reddish, the abdomen variable in color. Length, 9 to 9.5 mm.

FEMALE.—Head black in ground color, the pollen brownish, the broad facial and occipital orbits whitish. Hair and bristles yellow, the occipital cilia mostly black. Face swollen on slightly less than the lower half, the mystax composed almost entirely of bristles; a row of short hairs on either side of the face above the mystax. Proboscis black, pale-haired; palpi black, black-haired. Antennæ black, the first two segments clothed with black hair and bristles; third segment twice as long as wide, rather tapering from near the base, the brown sensory area covering most of the inner surface.

Mesonotum and scutellum thickly clothed with appressed, golden, tomentum-like pile, the median dark vittæ obscure, the sides gray pollinose behind the suture. Scutellum with four strong marginal bristles. Pleura cinereous pollinose, the mesopleura more brownish. Pleural pile short, whitish, the trichostical bristles mostly black.

Legs black; coxæ with whitish pollen and hair. Femora broadly reddish beneath; their apices and the broad bases of the tibiæ yellowish. Hair whitish, silvery white dorsally on the anterior four tibiæ and tarsi, mostly black above on the posterior tibiæ and tarsi. Bristles yellowish, black on the femora and on the upper surface of the posterior tarsi.

Wings cinereous hyaline; base of the anterior branch of the third vein with or without trace of an appendage in front. Squamæ and halteres reddish yellow.

Abdomen black, slightly shining, the apical four or five segments sometimes dark brownish-red, or reddish beneath the pollinose spots; very variable. Sides of third to seventh segments with a large, transverse whitish pollinose triangle behind, the apex

of each segment more or less narrowly whitish pollinose, thus forming entire fasciæ which may or may not be distinct; sides of the first and second segments pollinose on their whole length, the pollinose spots on the second segment subrectangular. Hair very short, black on the black portions, white on the pollinose areas. Venter grayish-brown pollinose, the base pale-haired, the remainder with mixed whitish and black hair.

TYPES.—Holotype, female, Sequoyah Co., Oklahoma, July 7, 1929; paratypes, two females, Ottawa Co., Oklahoma, July 20, 1929 (R. D. Bird). One paratype will be deposited in the United States National Museum and one in the University of Oklahoma.

In his work on the North American Dasypogoninæ, Back states that the scutellum of *nudiusculus* Loew sometimes bears four bristles. Such specimens may be distinguished from *birdi* by their yellowish tibiæ and first antennal segment.

LAPHYSTIA Loew

In 1927 (Can. Ent., LIX, pp. 85–87), I presented a key to the described species of *Laphystia* occurring in North America and suggested some obvious synonymy. Since that time I have seen a considerable amount of additional material and a further review of the species seems desirable at the present time. In order that the species may be the more readily identified I have prepared notes on the described species, except the two described in the paper above mentioned, and have enlarged the key to include all the species in the collection of the Museum.

In the Aldrich catalogue of Diptera (1904) two species are placed in the genus *Laphystia*, one of them with a query. In 1904, Coquillett recognized four species, two of which were wrongly determined. The synonymy given in the Aldrich catalogue under *sexfasciata* Say is incorrect, at least in regard to the references of Bigot and Williston. The synonymy of his *notata* with *sexfasciata* Say was published by Bigot himself, but at the suggestion of Osten Sacken, and it was that publication which led to the confusion which followed. In the Nearctic material before me I recognize nine species and have two additional ones from South America. Both of the Neotropical species show some rather marked differences in comparison with the Nearctic examples, but it seems to me that they should be grouped with them and I have not proposed new generic names, since I consider them to be nothing more than aberrant forms.

In order to determine the exact position of *Triclis notata* Bigot I wrote to Mr. J. E. Collin, believing the type to be in his collection, and have received the following information.

"Bigot's types of Asilidæ are no longer in my possession. I gave them to the Hope Museum, Oxford, before the war. I have written to Oxford about the type of *Laphystia* (*Triclis*) *notata* Bigot but it cannot be found. I have no doubt that as Bigot himself sank it as a synonym of *sexfasciata* he placed the type under that species AFTER CAREFULLY REMOVING ALL LABELS THAT WOULD HAVE IDENTIFIED THE SPECIMENS for that was his custom. It would appear necessary to accept his synonymy."

It is most unfortunate that the labels were removed from the specimen, but at the same time the synonymy cannot be accepted since Bigot's species is without question different from *sexfasciata* Say. I have identified as *notatus* the species which seems to agree best with Bigot's description.

TABLE OF SPECIES

1.—Femora not wholly reddish.....2.
Femora wholly reddish.....*confusa* Curran.
2.—Posterior femora reddish on the basal half or more.....3.
Posterior femora reddish on less than the basal third.....5.
3.—Pollinose bands on at least the second and third abdominal segment entire or practically so, at most very narrowly interrupted.....11.
Pollinose bands interrupted by at least the length of one spot.....4.
4.—Middle femora black with the basal fourth and apex reddish....*notata* Bigot.
Middle femora reddish with the apical fourth black.....*varipes*, n. sp.
5.—All the abdominal segments with entire pollinose cross-bands.....6.
Pollinose bands on the fourth and fifth segments interrupted or the abdomen golden pollinose.....7.
6.—Mesonotum clothed with erect hair on the whole surface.....13.
Mesonotum bare except in front of the scutellum.....*scalaris* Hermann.
7.—Abdomen golden pollinose; robust species.....*salti*, n. sp.
Abdomen with cinereous pollinose spots.....8.
8.—Erect mesonotal hair rather abundant and conspicuous.....10.
Erect mesonotal hair sparse or mostly wanting.....9.
9.—Dorsum of the abdomen mostly red on the apical half.....*rufiventris*, n. sp.
Abdomen wholly black.....12.
10.—Mesonotum with an area of appressed, shorter hair behind the suture on either side; abdominal fasciæ always very broadly interrupted; femora pollinose above.....*canadensis* Curran.
Mesonotal hair all erect or suberect, more abundant; bands on the second and third segments usually entire, at most narrowly interrupted; femora without pollen.....*litoralis*, n. sp.
11.—Abdomen reddish on the apical half at least beneath the pollinose spots....14.
Abdomen black in ground color.....*sexfasciata* Say.
12.—Middle femora conspicuously reddish at the base.....*notata* Bigot.
Middle femora wholly black basally.....*ochreifrons*, n. sp.

13.—The abdominal pollen leaves only a black triangle in the middle on the bases of the third to seventh segments.....*opaca* Coquillett.
The third to seventh segments are each shining black on the basal half except laterally.....*texensis*, n. sp.
14.—Abdomen brownish red on more than the apical half, not paler beneath the pollinose fasciæ.....*limatula* Coquillett.
Abdomen black, pale reddish beneath the pollinose fasciæ..*rufofasciata*, n. sp.

Laphystia sexfasciata Say

Dasypogon sexfasciata Say, 1823, Journ. Acad. Nat. Sci. Phila., III, p. 50.

Black with cinereous pollen, the abdominal fasciæ entire; legs partly reddish. Length, 9 to 10.5 mm.

Male.—Head cinereous-white, the hair and bristles wholly white. Palpi and proboscis black. Antennæ black; third segment about equal in length to the basal two combined, the style short and broad.

Thorax cinereous pollinose, with yellowish tinge on the dorsum. Hair white, the short appressed hair on the mesonotum and the bristles yellowish tinged. Narrow apex of the scutellum shining black.

Coxæ black, cinereous-white pollinose and white haired. Anterior femora black, the base obscurely reddish; middle femora reddish with the apical third black, the posterior pair reddish with the apical fourth black; tips of all the femora reddish; black portions of the femora pale pollinose, the reddish portions without pollen. Tibiæ and tarsi black, the tibiæ reddish on the basal third or less. Hair and bristles whitish.

Wings hyaline, the veins brown apically, yellowish on the basal half; first posterior cell not narrowed at the apex; anal cell closed just before the margin of the wing. Halteres reddish yellow.

Abdomen shining black, the lateral margins and the apices of the segments cinereous pollinose, the bands more or less widened medianly, the first and second segments almost wholly pollinose. Hair white. Genitalia shining black.

Female.—Agrees in all respects.

The specimens before me are from Manitoba.

Laphystia limatula Coquillett

Coquillett, 1904, Proc. Ent. Soc. Wash., VI, p. 180.

The only specimen of *limatula* seen by me is the type in the United States National Museum. The species is rather similar to *rufofasciata*, new species but the ground color of more than the apical half of the abdomen is brownish red, somewhat darker at the sides, and there is no indication of paler fasciæ beneath the pollinose bands. All the femora are black on the apical half, at least on the upper surface. The pollinose abdominal fasciæ are at most obscurely interrupted in the middle.

The type is from New Mexico.

Laphystia rufofasciata, new species

Black, the fourth to seventh segments with reddish fasciæ beneath the pollinose bands. Length, 8.5 to 9 mm.

MALE.—Black, the head with whitish pollen and hair; third antennal segment a little longer than the basal two combined; style somewhat longer than wide; broad, its apex rounded.

Thorax cinereous pollinose, the mesonotum somewhat darker in the middle; hair white, very short and mostly golden or brassy yellow on the disc of the mesonotum, only a few of the hairs on the posterior part long. Scutellum cinereous pollinose, the tip shining, the hair very short and brassy-yellow.

Coxæ black, whitish pollinose and pilose; femora reddish, the anterior pair black dorsally, the posterior pair black on the upper half of the apical third; femora cinereous pollinose on upper half or less; tibiæ and tarsi black, the tibiæ reddish yellow on almost the basal half; legs with whitish hair and bristles, the hair mostly very short and appressed; anterior femora with three or four fine bristles below.

Wings cinereous hyaline; first posterior cell only slightly narrowed at the apex. Squamæ pale yellow; halteres reddish-yellow.

Abdomen black, the first and second segments, broad sides of the third to seventh, preapical fasciæ on the third to sixth, and the apical third of the seventh cinereous-white pollinose, the apex of the second segment shining except laterally, the pollinose fasciæ occupying almost half of the intermediate segments and more or less distinctly interrupted on the fifth and sixth segments; fourth to sixth segments each with a medianly interrupted reddish fascia beneath the pollinose bands, the seventh reddish on the apical third. Hair very short and golden brown on the dorsum, a little longer and pale brassy yellow on the sides and venter; bristles whitish yellow.

FEMALE.—Anterior femora brown only on the apical half of the upper surface, the middle and posterior pair brown only on the apical third or fourth. Third abdominal segment with transverse reddish spots on either side, the eighth and ovipositor wholly yellowish red.

TYPES.—Holotype, male, Green River, Wyoming, July 2, 1920; allotype, female, and one paratype, female, Rock Springs, Wyoming, June 29, 1920 (F. E. Lutz).

This species is close to *limatula* Coquillett but the black abdomen with sharply defined reddish fasciæ will distinguish it. It is also less robust than *limatula* and has less extensively dark femora.

Laphystia notata Bigot

Triclis notata BIGOT, 1878, Ann. Soc. Ent., Fr., p. 433.

Laphystia sexfasciata BIGOT, 1879, Bull. Soc. Ent. Fr., p. lxviii.

Black, the legs partly reddish; second to sixth abdominal segments with posterior whitish triangles on either side. Length, 9.5 to 10.5 mm.

MALE.—Head white pollinose and pilose, the occipital cilia and bristles on the antennæ yellowish. Proboscis and palpi shining black. Antennæ black, brownish-yellow pollinose, white-haired; second segment decidedly shorter than the first; third segment a little shorter or of about the same length as the first two combined; style short and wide.

Thorax black in ground color, whitish pollinose, the mesonotum with three more or less distinct darker vittæ. Hair of the mesonotum whitish, the disc with mostly appressed yellow, tomentum-like hair, in front of the suture on either side and in front of the scutellum, with sparse, erect hair. The pollen on the mesonotum and mesopleura may have a brassy yellow tinge, except on the sides of the former. Scutellum whitish or yellowish, with the usual fringe of fine white hair and some appressed hair on the disc.

Femora black, the posterior pair reddish on about the basal half, the others with the bases narrowly reddish, the tips of all the femora and almost the basal half of the tibiæ reddish yellow, the apical half of the tibiæ and the tarsi wholly, black. Coxæ and femora cinereous-white pollinose, the posterior femora bare on more than the ventral half. Hair white, the bristles pale yellowish.

Wings cinereous hyaline, often tinged with brown, the veins brown and more or less clearly bordered with the same color. First posterior cell widely open.

Abdomen shining black, the sides white pollinose, the pollen produced triangularly inward on the posterior half of the second to sixth segments, the broad apex of the seventh segment pollinose. Venter cinereous yellow. Pile whitish, the dorsum with very short, appressed black hair.

FEMALE.—Eighth and ninth abdominal segments whitish pollinose.

Two males and six females from Galveston, Texas, and one from Lawrence, Kansas.

Laphystia opaca Coquillett

COQUILLETT, 1904, Proc. Ent. Soc. Wash., VI, p. 180.

Rather similar to *texensis* new species but at once distinguished from all the described species by the unusually extensive cinereous-pollinose abdomen. On the middle of the second and following segments the pollen leaves almost equilateral shining black triangles which extend back only to the middle of each segment. The femora show scarcely a trace of reddish at the base and the tibiæ are only narrowly reddish basally, the tips of the femora reddish. In other respects the description of *texensis* will be found to agree. In *texensis* the pollen leaves very evident shining black fasciæ which vary somewhat in width.

The type, from Texas, in the United States National Museum, is the only specimen I have seen.

Laphystia texensis, new species

Black, the tips of the femora and bases of the tibiæ reddish; abdomen cinereous-white pollinose with shining black fasciæ on the bases of the third to seventh segments. Length, 9 to 11.5 mm.

MALE.—Head with white pollen, pile and antennal bristles. Third antennal segment with brownish pollen, narrowing from the middle to the apex; style a little longer than wide, rather truncate apically, with a small bristle in the outer depression,

Thorax cinereous pollinose, usually with brownish-yellow tinge dorsally and with indications of three dark vittæ. Pile whitish, abundant, moderately long, erect.

Legs black, tips of all the femora, the narrow base of the posterior pair and about the basal fifth of all the tibiæ, reddish. Coxæ whitish pollinose and pilose; apices of the femora with a little whitish pollen above. Hair and bristles whitish, the femora with moderately long hair except dorsally.

Wings hyaline; veins brown, yellowish basally; first posterior cell but little narrowed apically. Halteres yellow.

Abdomen cinereous-white pollinose, the second to seventh segments with incomplete shining black fasciæ on the basal half, the fasciæ broadest in the middle and narrowing toward either side; the tips of the second to sixth segments more or less distinctly shining on the median half. Hair and bristles whitish on the sides and venter, brassy yellow and quite short on the dorsum.

FEMALE.—The shining black abdominal fasciæ are usually of almost equal width throughout and usually slightly wider than in the male; eighth segment wholly pollinose; genital segments black.

TYPES.—Holotype, male, allotype, female; two male and four female paratypes, all from Galveston, Texas, June 5, 1900 (W. M. Wheeler collection). Paratypes in the Canadian National Collection.

This species is readily distinguished from *sexfasciata* Say by the black femora and from *opaca* Coquillett by the transverse black fasciæ on the abdomen.

Laphystia varipes, new species

Black, the legs mostly reddish; abdomen sometimes reddish beneath the pollinose spots. Length, 11 to 11.5 mm.

MALE.—Head white pollinose and pilose, the occipital bristles yellowish. Proboscis and palpi shining black. Antennæ black, first segment white pollinose, the others yellowish brown; third segment longer than the basal two combined; style short and wide.

Thorax black in ground color, whitish pollinose, the mesonotum with brownish-yellow pollen. Hair of the mesonotum yellowish or rather golden, appressed and very short except anteriorly and posteriorly. Pleural hair white, that on the scutellum yellow, short and appressed except on the apical margin.

Legs reddish, the coxæ, broad apices of the tibiæ and all the tarsi black, the femora black as follows; an incomplete apical band on the posterior pair, a broader apical band on the median pair and the front pair on almost their whole length except below, where the reddish color extends to the middle, the base broadly and the narrow apex reddish, the tips of the posterior four femora also reddish. Coxæ, anterior four femora and upper half of the posterior pair, whitish pollinose. Hair and bristles whitish.

Wings cinereous hyaline; first posterior cell closed on one wing, broadly open in the other. Halteres reddish yellow.

Abdomen shining black, the sides cinereous-white pollinose, the pollen produced as posterior triangles on segments three to six, the inner ends pointed and separated from each other by one-third the width of the abdomen, the seventh segment with the apex broadly pollinose.

FEMALE.—Pollen of the face and front with a yellowish tinge; femora with less black, the posterior pair with only a blackish spot above, the middle pair black on the

upper half of the apical fourth, the yellow color much more extensive on the lower part of the anterior pair. The ground color beneath the pollinose spots on the third and following segments is reddish and the wholly pollinose eighth and ninth segments are reddish in ground color. The female is somewhat teneral and fully developed specimens are probably similar to the male.

TYPES.—Holotype, male, and allotype, female, Cherokee, Oklahoma, Salt Plains, June 16, 1930 (R. D. Bird).

Laphystia ochreifrons, new species

Black, the tips of the femora and the broad bases of the tibiæ reddish, the base of the posterior femora narrowly reddish. Length, 11 mm.

FEMALE.—Head cinereous-white pollinose, the front and vertex and sometimes the middle of the face ochreous, the orbits whitish. Hair white. Palpi and proboscis blackish white-haired. Antennæ black, the first segment with whitish, the others with yellowish-brown pollen; hair white, the bristles yellow, third segment somewhat longer than the basal two combined, the style short and broad.

Thorax black in ground color, densely cinereous pollinose, the dorsum and mesopleura rather ochreous; mesonotum with five obscure blackish vittæ, the inner pair united with the median vitta in front of the suture and joining the outer pair behind the suture. Mesonotal hair yellowish, short and appressed except in front, along the dorsocentral line and behind; pleural hair white. The sides of the mesonotum behind the suture, and the scutellum, are cinereous.

Legs black, immedite base of the posterior femora, tips of all the femora and the broad bases of the tibiæ, reddish. Femora cinereous pollinose except below. Hair and bristles white.

Wings cinereous hyaline; veins brownish, yellow basally. Halteres reddish-yellow.

Abdomen shining black, the sides whitish pollinose, the pollen produced inward as rather short triangles on the posterior part of the third to sixth segments, the broad apex of the seventh and the whole of the following segments pollinose. Hair black on the black area, white on the pollinose parts, very short and appressed on the dorsum. Venter cinereous-yellow pollinose and pilose.

TYPES.—Holotype, female, Kentucky, July 16; paratype, female, "Ohio."

In the color of the legs this species resembles *canadensis* Curran but the much shorter pile on the thorax, almost golden, broad, anterior band on the mesonotum and ochreous pollinose front distinguish it.

Laphystia litoralis, new species

Related to *canadensis* Curran but with more abundant pile on the mesonotum and the pollinose fasciæ on the second and third abdominal segments usually entire. Length, 11 to 12 mm.

MALE.—Head whitish or very pale yellowish-pollinose, the hair white, abundant. Palpi and proboscis blackish. Antennæ black, brownish pollinose, the basal segment with whitish pollen; hair whitish, the third segment usually with a short hair above near the middle; style short and broad.

Thorax yellowish-white pollinose, the mesonotum with ochreous tinge on the disc; pile white, erect, none of it appressed.

Legs black, the hair and bristles white; immediate base of the posterior femora, tips of all the femora and the broad bases of all the tibiæ reddish yellow; coxæ whitish pollinose, the femora without pollen except on the upper side of the posterior pair at the apex.

Wings hyaline; veins brownish, yellow basally. Squamæ yellow.

Abdomen shining black, with whitish or pale cinereous pollen, the hair white. First segment, sides of the abdomen and posterior fasciæ on the second and following segments densely pollinose, the posterior fasciæ on the fourth, fifth and sixth segments interrupted in the middle, that on the third segment only narrowly, so, or even entire, the inner ends of the transverse spots pointed. Seventh segment without pollen; first segment wholly pollinose.

FEMALE.—The pollinose bands on the third and following segments are sometimes more widely interrupted and more pointed inwardly, and the eighth and ninth segments are pollinose.

TYPES.—Four males and ten females, Rockaway, New York, August 13 and 19, 1903 (J. L. Zabrisky) and one female, Avalon, New Jersey, July 29, 1914. The holotype, male, and allotype, female, were taken at Rockaway on August 19.

Although *litoralis* resembles *canadensis* the absence of pollen on the femora and more abundant pile on the thorax will serve to distinguish it.

Laphystia rufiventris, new species

Black, the dorsum of the abdomen dark shining reddish on more than the apical half; knees reddish; wings cinereous-hyaline. Length, 11 mm.

FEMALE.—Head black in ground color, probably white pollinose (stained), the hair and bristles white. Proboscis and palpi shining black. Antennæ black; third segment about as long as the two basal combined; style very broad, not longer than wide.

Thorax black, the color of the pollen not determinable; hair and bristles brassy yellow, the mesonotal hair very short and appressed except a few long hairs posteriorly. Trichostical hair yellow.

Legs black, the tips of the femora reddish, the bases of the tibiæ narrowly reddish yellow. Hair and bristles of the legs whitish, the hair short and appressed.

Wings cinereous hyaline, the veins brown, those at the base of the wings reddish; anal cell short petiolate apically. Halteres reddish.

Abdomen black, the dorsum reddish, the bases of the third and fourth segments black with reddish tinge, the sides of the abdomen wholly black. Venter black. Hair pale yellow, very short and appressed dorsally, the dorsum of the second and third segments with golden-brown hair except apically and on the sides. The sides of the first six segments are evidently pollinose except behind, but there is no trace of posterior transverse spots. Apical segment reddish yellow.

TYPE.—Female, Green River, Wyoming, July 2, 1920 (F. E. Lutz).

Although I have but a single stained specimen of this species I have no hesitation in describing it. The color of the abdomen and arrangement of the pollen are distinctive and the species cannot well be confused with *limatula* Coquillett. No doubt the amount of red on the abdomen

will be found to be quite variable, but even though specimens in which the abdomen is all black should be found, the black legs and absence of transverse pollinose spots on the abdomen would provide a ready means for its identification.

Laphystia salti, new species

A beautiful large species, unusually robust, the abdomen clothed with dense, appressed golden tomentum and without erect hairs. Length, 13 mm.

FEMALE.—Head black in ground color, cinereous pollinose, the hair and bristles shining yellowish, face with an arched row of eight bristles above the oral margin. Proboscis and palpi shining black, the hair and bristles yellow. Antennæ dark reddish, the basal segment blackish, the second brown on the outer side; hair yellow; style broader than long.

Thorax black in ground color, with appressed golden tomentum on the anterior third, lateral and posterior borders of the mesonotum, along the suture, on the upper border of the mesopleura and the broad base of the scutellum; disc of the mesonotum with very short black hair; pleura brown pollinose, a large area above the front coxæ cinereous yellow; hair sparse, yellowish, the trichostical bristles golden. The black color of the mesonotum is produced forward into the anterior tomentose band as a slender triangle.

Legs black; tibiæ and tarsi brownish red; hair yellow, appressed, brown on the ventral surfaces of the femora; posterior femora swollen and with a row of five setigerous tubercles on either side of the ventral surface. Coxæ brown pollinose and yellow-haired.

Wings brownish, brownish yellow in front. First posterior cell closed and petiolate; anal cell short petiolate at the apex. Halteres reddish.

Abdomen black in ground color, the dorsum densely golden tomentose, the disc of the third and fourth segments with very short black hair except on the narrow base. Venter brown pollinose, the hair yellow, mostly appressed.

TYPE.—Female, Cienaga, Magdalena, Colombia, November 14, 1926 (G. Salt), ex Curran collection.

It is probable that this species should be placed in a separate genus on account of its robust legs, the presence of stout bristles on the posterior femora and apically petiolate first posterior cell. The bristles on the sides of the abdomen are also shorter and stouter than is usual in *Laphystia*.

Laphystia scalaris Hermann

Black or brown, opaque, the abdominal segments with rather narrow, apical cinereous pollinose fasciæ. Length, 9 to 11 mm.

MALE.—Head whitish pollinose, the front and upper part of the occiput rather ochreous. Hair and bristles whitish, the frontal hair, occipital cilia and bristles on the antennæ yellowish. The mystax is composed of a row of bristles along the oral margin and several bristles in the middle of the lower half of the face arranged in a triangle, the usual facial hair present. Proboscis and palpi shining black, the hair white. Antennæ black, yellowish-brown pollinose, the first segment cinereous above;

hair yellowish on the first segment, the second with black bristly hair; style short, tapering.

Thorax black in ground color, the mesonotum and mesopleura brownish-yellow pollinose, the pleura mostly whitish, the mesonotum with four brown vittæ, the median pair narrowly separated, the outer pair broad and interrupted at the suture. Hair of the mesonotum appressed, very short, black, the bristles yellow. Pleura with pale yellowish hair. Scutellum with two yellowish marginal bristles and hair similar to that on the mesonotum.

Legs black, the coxæ and femora cinereous pollinose, the hair yellowish. Bases of all the femora, the posterior pair broadly so, tips of the femora and the bases of all the tibiæ reddish. Bristles yellowish; tibiæ and tarsi with yellowish-white hair.

Wings cinereous-hyaline or tinged with brown, the veins brown, brownish red basally. First posterior cell not narrowed apically. Halteres reddish.

Abdomen opaque brown, the sides cinereous pollinose, the segments with bands of similar pollen on the apical third or slightly more, the pale fasciæ somewhat widened in the middle. Venter cinereous pollinose. Hair and bristles yellowish or cinereous, the dorsum with very short, appressed black hair. Genitalia shining black, the lateral lamellæ pale pollinose and armed at the apex with five long, yellow bristles.

FEMALE.—Pale abdominal fasciæ a little narrower, the eighth and ninth segments wholly pollinose, the ovipositor shining black.

One male and two females from Peru.

As may be gleaned from the description, this species differs from the Nearctic species by the presence of strong scutellar bristles and bristles on the male genitalia.

ANDRENOSOMA Rondani

The American flies placed in the genus *Nusa* Walker by most authors belong to the genera *Andrenosoma* and *Pilica*, new genus. The nearest related genus occurring in America is *Pogonosoma* Rondani, which possesses the same type of ovipositor. The genus *Nusa* does not occur in America. The three American genera mentioned above may be distinguished as follows:

1.—Only two submarginal cells.....2.
Three submarginal cells.....*Pogonosoma* Rondani.
2.—Lateral slopes of the metanotum, inside the base of the halteres, bare.
Andrenosoma Rondani.
Lateral slopes of metanotum pilose above the base of the abdomen.
Pilica, new genus.

TABLE OF SPECIES[1]

1.—Abdomen, including the ovipositor, wholly black; wing veins broadly bordered with brown..... *camposi*, n. sp.
Abdomen not wholly black, at least the apex reddish.....2.

[1]I am not sure that all of the species included in this key belong to the genus since Hermann included *olbus* Walker in this section of his key, from which my key is adapted. I have some of the same specimens of *olbus* examined by Hermann and they all belong to *Pilica*. I have accepted Hermann's interpretation of *pyrrhacra* and *erythropyga* but the types must be examined before their identity can be definitely established.

2.—Apical fourth or slightly more, of the posterior tibiæ strongly enlarged. *pygophora* Schiner.
Posterior tibiæ not suddenly enlarged....3.
3.—Abdomen mostly reddish....4.
Abdomen blackish, the apex reddish or yellowish....6.
4.—Posterior tibiæ mostly reddish....*xanthocnema* Wiedemann.
Posterior tibiæ black....5.
5.—All the tibiæ black....*calogastra* Philippi.
Anterior four tibiæ reddish on the basal half....*rufiventris* Blanchard.
6.—Abdomen dark brown, with clay-yellow pollen....*sarcophaga* Hermann.
Abdomen black, the pollen white; apex reddish....7.
7.—Sides of the front with several long black bristles....*?pyrrhacra* Say.
Sides of the front with a single black bristle....*?erythropyga* Wiedemann.

Andrenosoma camposi, new species

Wholly black, the abdomen with metallic reflections but not at all cyaneous or purplish; wing veins broadly clouded with brown. Length, about 22 mm.

FEMALE.—Head with yellowish-brown pollen, the vertex and facial knob bare, the posterior orbits cinereous; hair and bristles black, the sides of the face with fine yellow hair. Palpi compressed, gently concave on the outer side, black-haired. Antennæ black (third segment missing).

Thorax dull black, the mesonotum with a large shining spot on either side in front of and behind the suture; in the middle with a pair of inconspicuous brownish vittæ, the suture narrowly bordered with brownish on the inner half, the pleura mostly brownish pollinose. Hair wholly black. Lower edge of the scutellum shining, the border with three or four pairs of marginal bristles.

Legs wholly black, the hair and bristles black; coxæ brown pollinose.

Wings grayish, all the veins and the posterior border broadly bordered with brown, so that the wings appear mostly brown. Halteres black.

Abdomen shining black, the dorsum slightly opalescent; first and second segments wholly dull, the third to fifth each with a transverse, opaque triangle on either side behind. Hair wholly black. Ovipositor wholly black, the apical section with yellowish hair.

TYPE.—Female, Guyaquil, Ecuador (F. Campos).

Superficially this species resembles *Pilica olbus* Walker but lacks the bluish or violaceous coloring and the halteres are yellow in *olbus*.

PILICA, new genus

This genus is most closely related to *Andrenosoma* Rondani differing from it in having the lateral metanotal swellings pilose. In all other respects the two genera agree except that the first posterior cell is never closed in *Pilica*. The type of *Pilica* is *Laphria formidolosa* Walker, a species common in Central America. The genus is restricted to America and includes the following species: *Nusa rubidapex* Hermann, *Laphria rufipennis* Wiedemann, *Nusa phonicogaster* Hermann, *Laphria erythro-*

gaster Wiedemann; *Laphria pyrrhopyga* Wiedemann, *Nusa cyrtophora* Wiedemann, *Andrenosoma cyaniventris* Bromley, *Laphria olbus* Walker; *Andrenosoma punctata* Bromley, *Andrenosoma erax* Bromley, *Laphria clausicella* Macquart and *Andrenosoma elegans* Bromley.

Mallophora acra, new species

Related to *guildiana* Williston and *laphroides* Wiedemann. Differs from *guildiana* in having the posterior tibiæ wholly black-haired, the posterior surface reddish-yellow pubescent, and from *laphroides* in having all the femora broadly red basally. Length, 9.5 to 11 mm.

MALE.—Head cinereous-white pollinose and white haired; palpi mostly black-haired, the bristly hairs in the mystax and the coarser frontal hair black. Antennæ black, the first and second segments with black hair apically, the first white-haired on more than the basal half; third segment elongate, narrow, the arista about four-fifths as long.

Thorax yellowish-brown pollinose, white-haired; mesonotum with the discal pile tinged with yellow and with black hairs and bristles on the posterior half.

Coxæ and trochanters cinereous pollinose, the former white-haired. Femora black, broadly reddish basally and apically, sometimes mostly reddish; hair white, on the lower surface of the posterior pair, upper surface of the front pair and the coarse hairs on the middle pair black. Tibiæ reddish, with ferruginous apices; posterior pair black-haired, the others white-haired, with the apices broadly black. Tarsi castaneous, black-haired; pulvilli brown.

Wings cinereous hyaline; grayish in front; first posterior cell petiolate apically. Squamal fringe white. Halteres reddish.

Abdomen dull blackish above, grayish-yellow pollinose below, pile yellowish, white on the first and apical two or three segments. Genitalia reddish.

FEMALE.—Mystax and front with very few black bristles or hairs; anterior four tibiæ with black hairs only in front at the apex; thorax without black hairs posteriorly, but with black bristles. Genitalia reddish or brownish.

TYPES.—Holotype, male, allotype, female, and one male and seven female paratypes, Woods Co., Okla., July 8, 1930, and one female, Major Co., Okla., June 27, 1930 (R. D. Bird).

This species will trace to *laphroides* Wiedemann in the key published on page 12 of American Museum Novitates No. 415. The related species (couplets 12 and 13 of the key) may be separated as follows:

1.—Posterior tibiæ black-haired on the whole length dorsally ..... 2.
Posterior tibiæ white-haired on the basal half ..... 3.
2.—Femora broadly reddish basally ..... *acra* Curran.
Femora black basally ..... *laphroides* Wiedemann.
3.—Femora broadly reddish basally ..... *guildiana* Williston.
Femora black basally ..... *clausicella* Macquart.

Proctacanthus bromleyi, new species

Legs reddish, the coxæ and tarsi black; abdomen reddish, in the female marked with black. Length: male, 23 mm.; female, 26 mm.

MALE.—Head black in ground color, the face reddish, yellowish-cinereous pollinose. Face with yellow hair, the mystax with a row of yellow bristles below and a few black bristly hairs at the upper edge. Frontal hair and bristles black; a few of the occipital cilia black, the others yellow; beard white. Proboscis shining black, the hair yellowish and white. Palpi yellow, with fine white hair. Antennæ black, the first segment reddish; first two segments with yellow hair below, black above; third segment three times as long as wide, the style ferruginous, longer than antenna.

Thorax black, the humeri reddish. Pollen yellowish brown; disc of mesonotum blackish, in some views appearing mostly yellowish brown, in others the poorly separated dull black vittæ are distinct, the median one geminate in front, the outer ones interrupted at the suture. Hair and bristles of the mesonotum black, the dorsocentrals limited to the posterior fifth; a few pale hairs at the base of the scutellum, the scutellum with erect bristly hair, the marginal bristles not distinctly differentiated. Pleura with whitish hair and bristles, the mesopleura and upper part of the sternopleura with black hair.

Legs reddish; coxæ and tarsi black; coxæ densely cinereous pollinose and bearing whitish hair and bristles. Hair and bristles of the legs black, all the tibiæ and the basal two segments of the posterior tarsi bearing short golden-yellow hair posteriorly.

Wings hyaline, tinged with yellowish brown on the apical third. Squamal fringe whitish. Halteres reddish yellow.

Abdomen reddish, cinereous-yellow pollinose, yellow-haired; first segment and sides of the second and third black. Genitalia with short black hair, the inner part of the outer lamellæ with golden-yellow hair.

FEMALE.—Mystax thinner, with one or two pairs of black bristles in the middle below and more numerous black bristly hairs above; palpi with a few black bristly hairs apically. Base of the scutellum broadly whitish-haired, the marginal row of bristles yellowish white. Abdomen black, the first segment and the apices of the following tergites and sternites reddish, only the first five tergites pollinose, the apex of the fifth and the following ones wholly shining. On the fifth to seventh segments the reddish bands are very wide and almost or quite divide the black bands in the middle. Hair black on the dorsum, wholly pale on the first two segments, obscure on the shining area; hair of the venter pale, black on the shining sixth and seventh sternites, but not very conspicuous. Genitalia shining black, bearing very short, erect, bristly hairs and some finer ones; circlet of spines fairly strong and of moderate length.

TYPES.—Holotype, male, and allotype, female, Rio Frio, Magdalena, Colombia, July 2, 1927 (G. Salt), ex Curran collection.

Mr. S. W. Bromley had determined this as a new species and it gives me pleasure to name it in his honor.

P. bromleyi is related to *tibialis* Macquart but the reddish femora serve as a character for its ready separation. The much shorter and differently shaped male genitalia and pale mystax are also distinctive characters. A male of *tibialis* was taken along with these two specimens.

Erax camposiana, new species

A large species, the sixth and seventh segments of the male abdomen silvery white, the basal three cinereous pollinose, fourth and fifth mostly shining black; in the female the dorsum of the abdomen is brownish pollinose, the apices of the segments and the broad sides cinereous; male costa gently dilated. Length, exclusive of genitalia, 22 to 23 mm.

MALE.—Pollen of the head yellowish white, on the front and middle of the face ochreous; hair yellowish; bristles black, those on the lower half of the mystax mostly straw-yellow. Proboscis and palpi black, the hair and bristles yellow except for three or four black bristles on the apex of each palpus. Antennæ black, the first two segments brownish-yellow pollinose, yellowish-haired above, black below; third segment shorter than the first, lance-shaped, convex basally, arista two-sevenths longer than antenna, the apex somewhat broadened.

Thorax black, cinereous pollinose, with the usual black vittæ; a median vitta on the anterior half and the vittæ outside the median black one, yellowish tinged, the black median vitta not nearly reaching the scutellum. Hair black, sparse, not abundant posteriorly; two or three dorsocentrals in front of the suture. Pleura with pale pile in front and a little pale pile on other parts. Scutellum black-haired, with two pairs of strong marginal bristles.

Legs black, the tibiæ reddish yellow with black apices; coxæ cinereous pollinose; hair yellow, black on the dorsal surfaces of the femora at least apically and on the tarsi; bristles mostly black.

Wings tinged with brown, the basal and costal cells hyaline. Anterior branch of the third vein arising slightly beyond the base of the second posterior cell, without appendage (with one in female); costa dilated on subapical fourth. Knob of halteres brown.

Abdomen black in ground color, the first, second and third segments brownish-gray pollinose, the third and fourth broadly brown pollinose on the sides; sixth and seventh segments silvery white. Hair white; the fourth and fifth segments and apex of the third with black hair, except laterally. Venter grayish brown and cinereous pollinose, whitish-haired. Genitalia large, black, the lower lamellæ densely black-haired below; the upper lamellæ densely black-haired at the apex; from lateral view the upper lamellæ are widest at the middle.

FEMALE.—Mystax composed mostly of black bristles; third antennal segment more oval. Six or seven dorsocentrals in front of the suture. Abdomen brown pollinose above, the first segment wholly and the lateral margins of the second to sixth segments very broadly cinereous; seventh segment and ovipositor shining black. Hair white, black on the seventh segment. Ovipositor about 5 mm. long, with almost parallel sides.

TYPES.—Holotype, male, and allotype, female, Guayaquil, Ecuador (F. Campos).

This species is evidently related to *obscurus* Macquart, differing in having the abdomen almost wholly pale-haired and a little more uniform in color and much more strongly developed mesonotal vittæ.

REGASILUS, new genus

Related to *Neolophonotus* Engel but the face is gibbous on a little more than the lower half, the mesonotal hairs and bristles are much less numerous along the median line and the abdomen lacks bristles. It differs from *Apoclea* Macquart by possessing median bristles along the whole length of the thorax, and from *Asilus* Linnæus in lacking hair on the mesonotal slopes.

Head as in *Asilus* Linnæus, the lower half of the face gibbous. Mesonotum convex, the middle broadly bristled on the whole length but the bristles not abundant and not forming a "mane." Scutellum with one pair of strong marginal bristles and numerous hairs. Pteropleura with many hairs. Legs simple, the femora, especially the front pair, swollen. Wings with only two submarginal cells the posterior branch of the third vein ending behind the wing-tip. Abdomen extending to beyond the wing-tips, rather slender, gently tapering on the basal part; genitalia small.

GENOTYPE.—*Regasilus strigaria*, new species.

Since I have only a male specimen the character of the ovipositor is unknown. The American species related to *Asilus* have usually been placed in that genus, although they represent several distinct groups. The genus *Asilus* is a small one and comprises not more than a dozen described American species. A careful revision of our fauna will be necessary in order to determine the relationships of the species and to dispose of them in their proper genera.

Regasilus strigaria, new species

Thorax and legs dark reddish, the femora black beneath; mesonotum with a median black vitta and a spot on either side. Length, 16 mm.

MALE.—Head black, grayish-yellow pollinose; face and front with black hair and bristles; occipital pile yellowish, the mystax with some yellowish bristles below. Palpi small, black, pale yellow-haired. Antennæ black, the basal two segments grayish pollinose, black-haired; third segment missing.

Thorax dark reddish, with cinereous-yellow pollen; mesonotum with a broad median, geminate dull black vitta on the anterior three-fourths and an interrupted, posteriorly tapering black vitta on either side behind the suture, the small posterior spot triangular. Hair black, long and bristly on the median fourth; humeri and pleura pale yellowish-haired. Scutellum with the free border blackish, with scattered hair on the disc and one pair of strong marginals. Pleural bristles black.

Legs dark reddish; femora black ventrally, the tarsi ferruginous; hair pale yellowish, black on the femora above, the upper surface of the tibiæ apically and on the tarsi. Coxæ cinereous pollinose and yellowish pilose. Anterior femora with abundant long hair beneath on the basal two-thirds and less abundant black hair apically, without bristles.

Wings hyaline, the anterior cross-vein and the apical fourth of the wing brownish, the dark color especially noticeable along the veins; anterior branch of third vein without appendage. Halteres reddish.

Abdomen black, subshining, with a wide, reddish lateral stripe extending the whole length, widely separated from the sides of the tergites, the reddish color ex-

panded somewhat on the posterior of each segment and forming more or less complete posterior borders to the second and third segments; broad sides of the abdomen and the apices of the segments cinereous-white pollinose. Hair white on the sides and base of the abdomen, black on the dorsum. Genitalia ferruginous, the upper lobes black above. Venter reddish, the sides blackish; pile pale, the apical sternite with a tuft of black hair on the posterior border.

TYPE.—Male, Guayaquil, Ecuador (F. Campos).

Dysmachus strigitibia, new species

Abdomen uniformly cinereous-yellow pollinose; mesonotum with black vittæ; wings uniformly pale yellowish brown. Length, 16 mm.

MALE.—Head black, grayish-yellow pollinose. Front rather narrow, with black hairs and bristles, the ocellar tubercle with eight long, fine bristles. Occipital hair pale yellow, white on the lower half except along the orbits, the short, stout bristles on the upper part of the occiput black. Mystax reaching more than half-way to the antennæ, black, the middle portion dense and whitish on the lower half; facial gibbosity occupying the lower two-thirds of the face; sides and upper part of face without hair. Palpi black, black-haired; proboscis black, mostly yellow-haired. Antennæ black, the basal two segments with mixed black and yellow hair, the black predominating below, the yellow above; third segment missing.

Thorax black, cinereous-yellow pollinose. Mesonotum with the usual dull blackish vittæ, the median one tapering posteriorly and divided by a pale line for more than half its length, the outer vittæ divided at the suture and again above the wings. Hair and bristles of the mesonotum black, the bristles extending the whole length in the middle but not dense; sides with some pale hairs; pleura with pale hair and bristles except on the upper part of the rather brownish mesopleura. Scutellum with short whitish hair and one pair of strong bristles.

Coxæ black, cinereous-yellow pollinose and pilose. Femora black, with conspicuous yellowish pile and bristles, the anterior pair with black bristles; a row of fine ones along the entire ventral surface and some scattered ones above. Tibiæ reddish, yellow-haired, the anterior four black on the anterodorsal surface, all with black apices; bristles yellowish and black. Anterior tibiæ with several long, fine black bristles on either side of the ventral surface, the posterior bristles yellow; no long hairs. Tarsi black, black-haired.

Wings strongly tinged with yellowish brown; the anterior branch of the third vein arises a little beyond the base of the first posterior cell which is twice as wide as the apex of the discal cell. Halteres reddish yellow.

Abdomen black in ground color, densely grayish-ochreous pollinose, entirely clothed with pale yellowish hair and bristles; each segment with an interrupted row of marginal bristles. Venter with four rows of erect, fine yellowish bristles on the whole length. Genitalia rather small, from dorsal view widest near the base.

TYPE.—Male, Riobamba, Ecuador (F. Campos).